

### REMARKS

Claims 1-31 and 33-35 are pending in this application, of which claims 1 and 19 are independent. The amendments to claims 1, 19 and 35 do not raise issues that would require further search and/or consideration. Favorable reconsideration of the action of May 17, 2006 is requested in view of the following remarks.

#### **Claim objections**

Claim 1 has been amended to recite "a first mode." Claim 35 has been amended to include a period. The applicant respectfully requests withdrawal of the objections to claims 14-18 and 35.

#### **35 U.S.C. § 112, second paragraph rejections**

Claims 1 and 19 have been amended. The applicant respectfully requests withdrawal of the 35 U.S.C. § 112, second paragraph rejections.

#### **35 U.S.C. § 103 rejections**

Claims 1-31 and 33-35 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ito (US 6,345,039) in view of Chapman et al. (US 6,023,456).

In rejecting claim 1, the examiner states:

Regarding claims 1, 14-16, 19, 25-27, 31 and 33, Ito discloses a method for processing communication in a device having a first interface (101, 105); a rate calculation circuit (101), a transmitting buffer (102) (claimed controlling a rate of arrival of the data packets at the first interface...); an RM cell processing circuit (103); a transmission rate determining unit (198) and a transmission rate changing unit (199); a second interface (106, 104) (claimed transmitting the accepted packets through the second interface...). Further, Ito disclose that RM cell processing circuit (103) sets the transferable transmission rate at the time of relaying the data traffic controlling cell, and notifies the data ATM terminal (claimed sending control information from the device to at least one of a plurality of other devices to effect the rate of arrival) of the transferable transmission rate via data traffic ATM line terminating unit (column 4, lines 29-46; column 11, lines 41-48). However, Ito does not expressly disclose: identifying one of a plurality of classes; queuing packets according to the identified class; and transmitting packets according a policy associated with at least one of the plurality of classes of data flows.

Chapman teaches, in fig. 1 and 6, a plurality queues 10 (at least one for each class); an identifier 12 that identifies packet (using IP address, ports and protocol); and a controller 14

(claimed scheduler) characterizes a flow (using rate, duration, etc) and assigns it a class. The controller refers to a database 16 (claimed storage for configuration data) and uses output scheduling to allocate bandwidth among classes and implements and admission control policy for a class before delivering an output stream toward downstream nodes (column 3, lines 11-25; column 6, line 62, line 7, line 14). Furthermore, Chapman teaches, in Fig. 7, that the classification REJECT can be reflected back from the destination host to a source host (column 7, lines 15- 17)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a method that identifies on of a plurality of classes of data flows associate with data packets and queuing the data packets according to the identified class and transmit the packets according a policy associated with at least one of the plurality of classes of data flows, such as suggested by Chapman, to the method of Ito in order to provide a method of and apparatus for controlling a delivery of a traffic downstream according to quality of service parameters.

In Ito, there is no notion of a policy, much less "a policy associated with at least one of the plurality of classes of data flows" to which a packet accepted at the first interface of the device may be associated. Accordingly, it is no surprise that Ito does not contemplate "controlling a rate of arrival of the data packets at the first interface, [and] ... transmitting the accepted packets through the second interface, ... [where both] the transmitting and the controlling [are] in accordance with a policy associated with at least one of the plurality of classes of data flows," as recited in claim 1.

Chapman does not cure the deficiencies of Ito. Chapman discloses a traffic conditioner, located at a node of a network, that continuously monitors a traffic stream entering the node at a first interface, classifies the packets of the traffic stream into one of a plurality of classes according to preset criteria of traffic characteristics, and uses output scheduling to allocate bandwidth among the classes before delivering an output stream through a second interface of the node towards downstream nodes. (see col. 2, lines 40-49 and col. 3, lines 11-25). Chapman further describes that in some embodiments, if a node determines that a traffic stream entering the node is to be rejected for whatever reason, the node discards all but every k-th packet of the traffic stream, classifies each of the k-th packets as "REJECT" and forwards the k-th packets to the destination host, which in turn sends a message to the source host of the traffic stream to stop sending the traffic stream. (see col. 7, lines 15-27).

The examiner appears to suggest that the portion of Chapman related to the sending of the message to the source host of the traffic stream to stop the source host from sending the traffic stream corresponds to "controlling a rate of arrival of the data packets at the first interface," as recited in claim 1. However, claim 1 requires more. Specifically, claim 1 requires

the “controlling” to be “in accordance with a policy ...” At most, Chapman’s use of output scheduling to allocate bandwidth among the classes is in accordance with a policy. Chapman says nothing about “the transmitting [of the packets through a second interface of the node] and the controlling [of the rate of arrival of packets at the first interface of the node] both being in accordance with a policy associated with at least one of the plurality of classes of data flows.”

Neither Ito nor Chapman discloses nor would have made obvious “controlling a rate of arrival of the data packets at the first interface, ... the controlling including sending control information from the device to at least one of a plurality of other devices to effect the rate of arrival; ... and transmitting the accepted packets through the second interface, ... the transmitting and the controlling both being in accordance with a policy associated with at least one of the plurality of classes of data flows,” as recited in claim 1.

Claim 1 and its dependents are allowable for at least these reasons.

Claim 19 is directed to a device that includes “a rate shaper for controlling a rate of arrival of packets at the first network interface according to the configurable policy, the controlling including sending control information from the device to at least one of a plurality of other devices to effect the rate of arrival; and a scheduler for determining when to dequeue data packets queued in the plurality of queues according to the configurable policy for the classes of data flows.”

As previously-discussed, neither Ito nor Chapman discloses “controlling a rate of arrival of packets at the first network interface according to the configurable policy, ... and ... determining when to dequeue data packets queued in the plurality of queues according to the configurable policy ...” Accordingly, the applicant submits that neither Ito nor Chapman discloses or would have made obvious the “rate shaper” and the “scheduler” of claim 19.

Claim 19 and its dependents are allowable for at least these reasons.

Claims 5-9, 21, and 22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ito in view of Chapman et al., and further in view of Epstein et al. (US 6,684,329).

Claims 5 and 28-30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ito in view of Chapman et al., and further in view of Dillon et al. (US 6,658,463).

Claims 12 and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ito in view of Chapman et al., and further in view of Kloth et al. (US 6,598,034).

Claims 17, 18, 23, and 24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ito in view of Chapman et al., and further in view of Frey et al. (US 4,245,343).

All of the dependent claims are allowable for at least the same reasons as the claims on which they depend.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

*August 7, 2006*  
Date: \_\_\_\_\_

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